[0024] The object, as well as other objects, features and advantages of the present invention will become more apparent from the following detailed description of the preferred embodiments taken with reference to the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

[0025] **FIG. 1** is a cross-sectional view schematically showing a structure of a liquid crystal display device according to a first embodiment of the present invention;

[0026] **FIG. 2** is a cross-sectional view schematically showing a structure of a liquid crystal display device according to a second embodiment of the present invention;

[0027] **FIG. 3** is a cross-sectional view schematically showing a structure of a liquid crystal display device according to a third embodiment of the present invention;

[0028] **FIG. 4** is a cross-sectional view schematically showing alternative structure of the liquid crystal display device according to the third embodiment of the present invention;

[0029] **FIG. 5** is a cross-sectional view schematically showing a structure of a liquid crystal display device according to a forth embodiment of the present invention;

[0030] **FIG. 6** is a cross-sectional view schematically showing alternative structure of the liquid crystal display device according to the forth embodiment of the present invention; and

[0031] **FIG. 7** is a cross-sectional view showing a structure of a liquid crystal display device using a lighting unit of a conventional edge light type.

BEST MODE FOR CARRYING OUT THE INVENTION

[0032] Hereinafter, embodiments of the present invention will be described with reference to the drawings.

First Embodiment

[0033] As shown in **FIG. 1**, a lighting unit UT according to the present embodiment comprises light sources **2**, a flat light guiding plate **3** for transmitting light from the light sources **2**, reflectors **4** disposed to enclose the light sources **2** to reflect the light toward the light guiding plate **3**, and housings **10** disposed to enclose the reflectors **4**. The light source **2** is a fluorescent discharge tube driven by a high-frequency alternating current (40 to 100 kHz) to emit light. Although two light sources **2** are disposed on one side surface of the light guiding plate **3**, one light source **2** may be disposed on one side surface thereof, one or a plurality of light source **2** may be disposed on both right and left side surfaces thereof, and one light source **2** may be disposed along two sides of four sides of the side surface thereof so as to form an L-shape (called as an "L-shaped fluorescent discharge tube"), each of which is called as an edge light type.

[0034] The light guiding plate **3** is made of a material having optimal optical characteristics, such as transmissivity and a refractive index required for transmitting light, for example, acrylic. The light guiding plate **3** is provided with a dot pattern or a groove pattern (not shown) on a rear surface thereof, which varies a shape thereof according to a distance from the light source **2**.

[0035] The reflector **4** is configured to reflect the light from the fluorescent discharge tube and to allow the light to efficiently enter an incident side surface **3***a* of the light guiding plate **3**, and formed by a white resinous film or a metal film made of silver or aluminum or the like, having a high reflectivity. The reflector **4** is folded in U-shape in cross-section so as to enclose the fluorescent discharge tube **2**.

[0036] The reflecting sheet **5** serves to return the light emanating from the rear surface of the light guiding plate **3** to the same again, thereby increasing an illumination light emanating therefrom, and is disposed along the rear surface of the light guiding plate **3**. The reflecting sheet **5** is formed by a white resinous film having a high reflectivity. The reflector **4** may be integral with the reflecting sheet **5** by folding one side of the reflecting sheet **5** in U-shape so as to enclose the light source **2**.

[0037] The housing **10** is disposed in the vicinity of the reflector **4** so as to enclose side and upper surfaces thereof. The housing **10** serves to hold a liquid crystal display panel **1**, the light source **2**, and the light guiding plate **3** as well as the reflector. The housing **10** is made of polycarbonate resin, for example.

[0038] A contact holding portion **10***s* of the housing **10** has a processed surface SA formed by a process such as texturing for increasing roughness degree of the surface (a surface contacting the light guiding plate **3**) thereof. A portion having the processed surface SA with increased roughness degree may be formed on a portion **3***b* of the light guiding plate **3** corresponding to the contact holding portion **10***s*, or on both of the contact holding portion **10***s* and the portion **3***b* corresponding to the same. By applying texturing or the like to these portions for increasing roughness degree of the surface, occurrence of a disagreeable crack is inhibited. Therefore, in a liquid crystal display device L according to the present embodiment, although the light guiding plate **3** and the housing **10** thermally expand by heat generated from the light source **2** and thermally contract when the light source **2** is turned off, a separating noise generated between the light guiding plate **3** and the housing **10** is inhibited, and the light guiding plate **3** and the housing **10** contact each other by cushioning.

[0039] By attaching a rear cover RC which serves as a casing and a front side flame FC made of metal to the lighting unit UT, and by mounting a liquid crystal display panel **1** thereon after assembling the light guiding plate **3**, the reflecting sheet **5** and the light source **2**, the liquid crystal display device L is formed. The liquid crystal display panel **1** is configured to display characters and images, and comprises the liquid crystal display panel **1** structured such that a pair of transparent substrates provided with display electrodes are disposed to be opposed to each other with an appropriate spacing, a liquid crystal material is filled in the spacing with peripheries of the transparent substrates sealed by a sealing material, a plurality of driving circuits (not shown) disposed around the liquid crystal display panel **1** and configured to allow the liquid crystal display panel **1** to display, and a substrate (not shown) on which the driving circuits are mounted.

[0040] In the liquid crystal display device L structured such that the liquid crystal display panel **1** is mounted on the